Exhibit 300 (BY2010)

PART ONE	
OVERVIEW	
1. Date of Submission:	2008-09-08
2. Agency:	026
3. Bureau:	00
4. Name of this Capital Asset:	GSFC Space and Ground Network IT Support
5. Unique Project Identifier:	026-00-01-05-01-2004-00

6. What kind of investment will this be in FY2010?

Operations and Maintenance

7. What was the first budget year this investment was submitted to OMB?

FY2001 or earlier

8. Provide a brief summary and justification for this investment, including a brief description of how this closes in part or in whole an identified agency performance gap.

The National Aeronautics and Space Administration Space and Ground Networks, in operation with existing systems since the 1980s, provide simultaneous real-time mission communications for multiple spacecraft from Space Network and Ground Network tracking stations. These existing, highly specialized communication facilities are operated and maintained for pre-launch checkout, launch and landing, and on-orbit tracking, telemetry data acquisition, and command services for crewed and robotic low-Earth orbiting spacecraft, and suborbital rockets, aircraft, and balloons. Without this investment, multi-billion dollar space assets cannot communicate their mission results back to Earth. Space Network - The nine Tracking and Data Relay Satellites (TDRS) in geosynchronous orbit are situated in Earth orbit such that they can provide continual, global coverage. One satellite is solely used to support National Science Foundation (NSF) operations at the South Pole and is not available for service to other customers. SN does not develop the TDRS spacecraft, but operates them in orbit. SN customers include the Human Space Flight International Space Station and the Space Shuttle, both of which schedule continuous coverage from the network. Ground Network - The National Aeronautics and Space Administration Ground Network, in operation prior to the 1980s, provides mission communications for multiple spacecraft via large steerable antennas from the Ground Network tracking stations. The Ground Network also provides precision laser tracking of spacecraft, and contingency air-to-ground voice communications for human spaceflight. If this investment is NOT funded, then exploration findings and science results from NASA near-Earth spacecraft will be lost, uncontrolled spacecraft may interfere or collide with other spacecraft causing an international incident, re-entering spacecraft may impact inhabited regions without warning, and on-orbit crews would have no way of communicating back to Earth in real-time. The Space and Ground Network IT Support is a steady-state operations investment under the NASA IT Capital Planning Investment Control Process.

9. Did the Agency's Executive/Investment Committee approve this request?

yes

9.a. If "yes," what was the date of this approval?

2008-06-19

10. Did the Program/Project Manager review this Exhibit?

yes

11. Program/Project Manager Name:

Philip E. Liebrecht

Program/Project Manager Phone:

301-286-5220

Program/Project Manager Email:

philip.e.liebrecht@nasa.gov

11.a. What is the current FAC-P/PM certification level of the project/program manager?

Senior/Expert/DAWIA-Level 3

11.b. When was the Program/Project Manager Assigned?

1997-12-21	
11.c. What date did the Program/Project Manager receive the FACP/PM certification? If the certification has not been issued, what is the anticipated date for certification?	
2008-08-08	
12. Has the agency developed and/or promoted cost effective, energy-efficient and environmentally sustainable techniques or practices for this project.	
yes	
12.a. Will this investment include electronic assets (including computers)?	
yes	
12.b. Is this investment for new construction or major retrofit of a Federal building or facility? (answer applicable to non-IT assets only)	
no	
13. Does this investment directly support one of the PMA initiatives?	
no	
14. Does this investment support a program assessed using the Program Assessment Rating Tool (PART)?	
yes	
14.a. If yes, does this investment address a weakness found during the PART review?	
no	
14.b. If yes, what is the name of the PARTed program?	
10002314 - Space and Flight Support	
14.c. If yes, what rating did the PART receive?	
Adequate	
15. Is this investment for information technology?	
yes	
16. What is the level of the IT Project (per CIO Council's PM Guidance)?	
Level 3	
17. What project management qualifications does the Project Manager have? (per CIO Council's PM Guidance)	
(1) Project manager has been validated as qualified for this investment	
18. Is this investment identified as high risk on the Q4 - FY 2008 agency high risk report (per OMB memorandum M-05-23)?	
no	
19. Is this a financial management system?	
no	
20. What is the percentage breakout for the total FY2010 funding request for the following? (This should total 100%)	

Hardware	40
Software	30
Services	30
Other	0

21. If this project produces information dissemination products for the public, are these products published to the Internet in conformance with OMB Memorandum 05-04 and included in your agency inventory, schedules and priorities?	
n/a	
22. Contact information of individual responsible for privacy related questions.	
Name	
Patti Stockman	
Phone Number	
(202) 358-4784	
Title	

Agency Privacy and Records Manager

Email

patti.stockman@nasa.gov

23. Are the records produced by this investment appropriately scheduled with the National Archives and Records Administration's approval?

yes

24. Does this investment directly support one of the GAO High Risk Areas?

no

SUMMARY OF SPEND

1. Provide the total estimated life-cycle cost for this investment by completing the following table. All amounts represent budget authority in millions, and are rounded to three decimal places. Federal personnel costs should be included only in the row designated Government FTE Cost, and should be excluded from the amounts shown for Planning, Full Acquisition, and Operation/Maintenance. The total estimated annual cost of the investment is the sum of costs for Planning, Full Acquisition, and Operation/Maintenance. For Federal buildings and facilities, life-cycle costs should include long term energy, environmental, decommissioning, and/or restoration costs. The costs associated with the entire life-cycle of the investment should be included in this report.

All amounts represent Budget Authority

(Estimates for BY+1 and beyond are for planning purposes only and do not represent budget decisions)

	PY-1 & Earlier	PY	CY	BY
	-2007	2008	2009	2010
Planning Budgetary Resources	0	0	0	0
Acquisition Budgetary Resources	0	0	0	0
Maintenance Budgetary Resources	10.12	7.1314	5.2666	5.1983
Government FTE Cost	1.268	0.1616	0.1694	0.1777
# of FTEs	11	1	1	1

Note: For the cross-agency investments, this table should include all funding (both managing partner and partner agencies).

Government FTE Costs should not be included as part of the TOTAL represented.

2. Will this project require the agency to hire additional FTE's?

no

3. If the summary of spending has changed from the FY2009 President's budget request, briefly explain those changes.

Summary reflects increased NASA Direct funding and reduced reimbursable funding from other Federal departments/agencies and commercial customers. FTEs revised to reflect CIO guidance defining IT support.

PERFORMANCE

In order to successfully address this area of the exhibit 300, performance goals must be provided for the agency and be linked to the annual performance plan. The investment must discuss the agency's mission and strategic goals, and performance measures (indicators) must be provided. These goals need to map to the gap in the agency's strategic goals and objectives this investment is designed to fill. They are the internal and external performance benefits this investment is expected to deliver to the agency (e.g., improve efficiency by 60 percent, increase citizen participation by 300 percent a year to achieve an overall citizen participation rate of 75 percent by FY 2xxx, etc.). The goals must be clearly measurable investment outcomes, and if applicable, investment outputs. They do not include the completion date of the module, milestones, or investment, or general goals, such as, significant, better, improved that do not have a quantitative measure.

Agencies must use the following table to report performance goals and measures for the major investment and use the Federal Enterprise Architecture (FEA) Performance Reference Model (PRM). Map all Measurement Indicators to the corresponding Measurement Area and Measurement Grouping identified in the PRM. There should be at least one Measurement Indicator for each of the four different Measurement Areas (for each fiscal year). The PRM is available at www.egov.gov. The table can be extended to include performance measures for years beyond the next President's Budget.

	Fiscal Year	Strategic Goal Supported	Measurement Area	Measurement Grouping	Measurement Indicator	Baseline	Planned Improvement to the Baseline	Actual Results
1	2009	Goal 3: Develop a balanced overall program of science, exploration and aeronautics.	Mission and Business Results	Customer Services	Customers served	Number of orbital customers	Maintain at current level	TBD
2	2009	Goal 2: Complete the International Space Station in a manner consistent with NASA's International Partner commitments and the needs of human Exploration.	Customer Results	Access	Space Network availability	97%	98% Std of Excellence	TBD
3	2009	Goal 2: Complete the International Space Station in a manner consistent with NASA's International Partner commitments and the needs of human Exploration.	Technology	Service Availability	Service Proficiency	95%	Maintain at current level	TBD
4	2009	Goal 3: Develop a balanced overall program of science, exploration and aeronautics.	Processes and Activities	Innovation and Improvement	Customer service agreements	Number of signed agreements	Maintain at current level	TBD
5	2009	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Customer Results	Frequency and Depth	Space Network global coverage	100%	Maintain at current level	TBD
6	2006	Goal 3: Develop a balanced overall program of science, exploration and aeronautics.	Mission and Business Results	Scientific and Technological Research and Innovation	Units of Service	90,000 hours per year	Meet levels agreed to by customers	122,867 hours per year
7	2006	Goal 2: Complete the International Space Station in a manner consistent with NASA's International Partner commitments and the needs of human Exploration.	Customer Results	Service Availability	Space Network availability	97%	98% Std of Excellence	97.2%
8	2006	Goal 2: Complete the International Space Station in a manner consistent with NASA's International Partner	Technology	Service Availability	Service Proficiency	95%	Maintain at current level	99.6%

		commitments and the needs of human Exploration.						
9	2006	Goal 3: Develop a balanced overall program of science, exploration and aeronautics.	Processes and Activities	Innovation and Improvement	Customer service agreements	Number of signed agreements	Maintain at current level	37
10	2006	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Customer Results	Frequency and Depth	Space Network global coverage	100%	Maintain at current level	100%
11	2007	Goal 3: Develop a balanced overall program of science, exploration and aeronautics.	Mission and Business Results	Scientific and Technological Research and Innovation	Units of Service	90,000 hours per year	Meet levels agreed to by customers	122,273 hours per year
12	2007	Goal 2: Complete the International Space Station in a manner consistent with NASA's International Partner commitments and the needs of human Exploration.	Customer Results	Service Availability	Space Network availability	97%	98% Std of Excellence	97.3
13	2007	Goal 2: Complete the International Space Station in a manner consistent with NASA's International Partner commitments and the needs of human Exploration.	Technology	Service Availability	Service Proficiency	95%	Maintain at current level	99.6%
14	2007	Goal 3: Develop a balanced overall program of science, exploration and aeronautics.	Processes and Activities	Innovation and Improvement	Customer service agreements	Number of signed agreements	Maintain at current level	37
15	2007	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Customer Results	Service Availability	Space Network global coverage	100%	Maintain at current level	100%
16	2008	Goal 3: Develop a balanced overall program of science, exploration and aeronautics.	Mission and Business Results	Scientific and Technological Research and Innovation	Units of Service	90,000 hours per year	Meet levels agreed to by customers	69,924 hours (thru 6/2008)
17	2008	Goal 2: Complete the International Space Station in a manner consistent with NASA's International Partner	Customer Results	Service Availability	Space Network availability	97%	98% Std of Excellence	97% (thru 6/2008)

		commitments and the needs of human Exploration.						
18	2008	Goal 2: Complete the International Space Station in a manner consistent with NASA's International Partner commitments and the needs of human Exploration.	Technology	Service Availability	Service Proficiency	95%	Maintain at current level	99.6% (thru 6/2008)
19	2008	Goal 3: Develop a balanced overall program of science, exploration and aeronautics.	Processes and Activities	Innovation and Improvement	Customer service agreements	Number of signed agreements	Maintain at current level	60
20	2008	Goal 1: Fly the Shuttle as safely as possible until its retirement, not later than 2010.	Customer Results	Frequency and Depth	Space Network global coverage	100%	Maintain at current level	100%
21	2010	Goal 3: Develop a balanced overall program of science, exploration and aeronautics.	Mission and Business Results	Scientific and Technological Research and Innovation	Units of Service	90,000 hours per year	Meet levels agreed to by customers	TBD
22	2010	Goal 2: Complete the International Space Station in a manner consistent with NASA's International Partner commitments and the needs of human Exploration.	Customer Results	Service Availability	Space Network availability	97%	98% Std of Excellence	TBD
23	2010	Goal 2: Complete the International Space Station in a manner consistent with NASA's International Partner commitments and the needs of human Exploration.	Technology	Service Availability	Service Proficiency	95%	Maintain at current level	TBD
24	2010	Goal 3: Develop a balanced overall program of science, exploration and aeronautics.	Processes and Activities	Innovation and Improvement	Customer service agreements	Number of signed agreements	Maintain at current level	TBD

EA
In order to successfully address this area of the business case and capital asset plan you must ensure the investment is included in the agency's EA and Capital Planning and Investment Control (CPIC) process, and is mapped to and supports the FEA. You must also ensure the business case demonstrates the relationship between the investment and the business, performance, data, services, application, and technology layers of the agency's EA.
1. Is this investment included in your agency's target enterprise architecture?

yes

2. Is this investment included in the agency's EA Transition Strategy?

yes

2.a. If yes, provide the investment name as identified in the Transition Strategy provided in the agency's most recent annual EA Assessment.

GSFC Space and Ground Network IT Support, under SOMD/Space Communications (not including Deep Space Network)

3. Is this investment identified in a completed (contains a target architecture) and approved segment architecture?

yes

3.a. If yes, provide the six digit code corresponding to the agency segment architecture. The segment architecture codes are maintained by the agency Chief Architect.

463-000

4. Identify the service components funded by this major IT investment (e.g., knowledge management, content management, customer relationship management, etc.). Provide this information in the format of the following table. For detailed guidance regarding components, please refer to http://www.whitehouse.gov/omb/egov/.

Component: Use existing SRM Components or identify as NEW. A NEW component is one not already identified as a service component in the FEA SRM.

Reused Name and UPI: A reused component is one being funded by another investment, but being used by this investment. Rather than answer yes or no, identify the reused service component funded by the other investment and identify the other investment using the Unique Project Identifier (UPI) code from the OMB Ex 300 or Ex 53 submission.

Internal or External Reuse?: Internal reuse is within an agency. For example, one agency within a department is reusing a service component provided by another agency within the same department. External reuse is one agency within a department reusing a service component provided by another agency in another department. A good example of this is an E-Gov initiative service being reused by multiple organizations across the federal government.

Funding Percentage: Please provide the percentage of the BY requested funding amount used for each service component listed in the table. If external, provide the funding level transferred to another agency to pay for the service.

	Agency Component Name	Agency Component Description	Service Type	Component	Reused Component Name	Reused UPI	Internal or External Reuse?	Funding %
1	Voice Communications	Crew radio using UHF	Communication	Voice Communications			No Reuse	8
2	Remote Systems Control	Authorized Users can submit web-based request for network services and components.	Systems Management	Remote Systems Control			No Reuse	8
3	Network Management	Schedule and configuration confirmation is provided by the customer	Organizational Management	Network Management			No Reuse	8
4	Customer Agreements	Service Level Agreements are negotiated annually for customers	Customer Relationship Management	Partner Relationship Management			No Reuse	8
5	Science Alerts	SN Demand Access Service allows Swift spacecraft to alert ground-based observatories of gamma-ray bursts	Customer Preferences	Alerts and Notifications			No Reuse	8
6	Scheduling	Space Communications Program management	Customer Initiated Assistance	Scheduling			No Reuse	8

							No Reuse	8
7	Computers / Automation Management	SN fleet and station management, GN station management	Routing and Scheduling	NEW			No Reuse	8
8	Satellite communications	Tracking and Data Acquisition	Communication	NEW			No Reuse	8
9	LAN	Internal networking	Data Management	Data Exchange			No Reuse	8
10	Industrial Control Systems	Protocol conversion	Data Management	Extraction and Transformation			No Reuse	8
11	WAN interface	NISN interface	Development and Integration	Enterprise Application Integration			No Reuse	8
12	Computer Management	Monitor and Control Systems	Asset / Materials Management	Computers / Automation Management			No Reuse	8

5. To demonstrate how this major IT investment aligns with the FEA Technical Reference Model (TRM), please list the Service Areas, Categories, Standards, and Service Specifications supporting this IT investment.

FEA SRM Component: Service Components identified in the previous question should be entered in this column. Please enter multiple rows for FEA SRM Components supported by multiple TRM Service Specifications.

Service Specification: In the Service Specification field, Agencies should provide information on the specified technical standard or vendor product mapped to the FEA TRM Service Standard, including model or version numbers, as appropriate.

	SRM Component	Service Area	Service Category	Service Standard	Service Specification (i.e., vendor and product name)
1	NEW	Service Access and Delivery	Service Transport	Service Transport	CCSDS.org telecommand standard
2	NEW	Service Access and Delivery	Access Channels	Other Electronic Channels	Viasat antenna, Datron antenna, Enertec receiver, In-Snec receiver, Microdyne Receiver, Harris receiver
3	Data Exchange	Service Access and Delivery	Delivery Channels	Intranet	ethernet, fiber optic
4	Computers / Automation Management	Service Platform and Infrastructure	Hardware / Infrastructure	Embedded Technology Devices	RAID
5	Computers / Automation Management	Service Platform and Infrastructure	Hardware / Infrastructure	Servers / Computers	HP Alpha, Sun, Dell
6	Network Management	Service Platform and Infrastructure	Hardware / Infrastructure	Network Devices / Standards	Avtek PTP, Cisco, Comtrol, National Instruments
7	Remote Systems Control	Service Platform and Infrastructure	Delivery Servers	Web Servers	Apache
8	Computers / Automation Management	Service Platform and Infrastructure	Support Platforms	Dependent Platform	Windows, OpenVMS, HP-UX, Solaris
9	Computers / Automation Management	Service Platform and Infrastructure	Support Platforms	Independent Platform	Linux
10	Extraction and Transformation	Service Interface and Integration	Interoperability	Data Format / Classification	Avtek PTP, Apogee Labs Tracking Data Formatter

11	Enterprise Application Integration	Service Interface and Integration	Integration	Middleware	CORBA, ObjectBroker
12	Scheduling	Service Interface and Integration	Integration	Middleware	Maximo
13	Voice Communications	Service Access and Delivery	Access Channels	Collaboration / Communications	UHF
14	Alerts and Notifications	Service Access and Delivery	Access Channels	Other Electronic Channels	Multiple Access Beamforming Equipment
15	Partner Relationship Management	Service Platform and Infrastructure	Database / Storage	Database	PDF

6. Will the application leverage existing components and/or applications across the Government (i.e., FirstGov, Pay.Gov, etc)?

yes

6.a. If yes, please describe.

Ground Network Station Control Computer software replacement effort is re-using and adapting code developed for Applied Physics Laboratory of the Johns Hopkins University. White Sands Ground Station is re-using components developed for NOAA and DoD AFSCN. Have added other components to GSA CORE.gov site, and continue to evaluate components for reuse. NASA uses FirstGov and has an Integrated Enterprise Management Program separate from this investment. This investment relies heavily on COTS. Investment currently has in place contingency support agreements with other government agencies for use of their assets. NASA is currently using assets from NOAA and NPOESS Integrated Program Office for contingency support. GSFC hosted annual meeting with NOAA, NPOESS, and DoD 6/23-24/2005 to discuss oportunities for interoperability. GSFC participates in joint DoD/NOAA/NASA Satellite Operations working group. GSFC hosted briefings and tour by DoD AFSCN/50SW/22SOPS commander 5/17/07.

PART THREE

RISK

You should perform a risk assessment during the early planning and initial concept phase of the investment's life-cycle, develop a risk-adjusted life-cycle cost estimate and a plan to eliminate, mitigate or manage risk, and be actively managing risk throughout the investment's life-cycle.

Answer the following questions to describe how you are managing investment risks.

1. Does the investment have a Risk Management Plan?

yes

1.a. If yes, what is the date of the plan?

2008-05-27

1.b. Has the Risk Management Plan been significantly changed since last year's submission to OMB?

yes

1.c. If yes, describe any significant changes:

Former integrated plan split into constituent Space Network and Ground Network segments as separate plans.

COST & SCHEDULE

1. Was operational analysis conducted?

yes

1.a. If yes, provide the date the analysis was completed.

2008-07-10

What were the results of your operational analysis?

Operational performance reported daily and weekly, reviews conducted monthly (and for Space Network quarterly). Conducted Ground Network station closure impact analyses: Maintenance on obsolete systems is being deferred, Re-balancing daily number of passes taken per station to reduce costs, Deferring purchases of replacement material. Ground Network Sustaining Engineering Review conducted in February 2007.